Teaching Rifle Positions to New Junior Shooters
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This booklet is a reprint of three articles that originally appeared in the CMP junior leader magazine, On the Mark, http://thecmp.org/communications/on-the-mark/. The CMP receives many questions from coaches and instructors who work with new and beginning shooters regarding the best methods to teaching rifle positions to new shooters. These three articles present teaching methods developed by the CMP in conjunction with its programs to train rifle instructors through the JROTC Marksmanship Instructor Course (JMIC) and the GSM Master Instructor Workshops.

We spent several years studying instructional methods for teaching rifle positions to new shooters. We reexamined the traditional “descriptive” and “step methods” and concluded that while both had merits, neither method was truly effective in getting new shooters into consistently good positions. We solved the problem by isolating the basic, essential elements of each position. Then we identified a way to teach that basic element and the order in which to teach it. The essential position elements turned out to be 1) the position foundation (body orientation), 2) the left elbow location (right-handed shooter), 3) the head/butt-plate relationship, 4) adjusting right height with the left hand and arm, 5) properly sequencing sling adjustment and 6) orienting the position to the target. When we focused exclusively on those elements and taught them in sequence to both junior and adult test groups the outcomes were new shooters with uniformly excellent starter positions. Those teaching methods are contained in these articles.

The three articles in this booklet describe how to apply those methods when teaching the prone, standing and kneeling positions. Since preparing these original articles for On the Mark, I have updated these articles and added several additional chapters to form a new CMP-published book call Coaching Young Rifle Shooters. If you want more information about how to instruct new shooters, use the information in the box to order this new instructional publication.

Gary Anderson, Director of Civilian Marksmanship Emeritus
Several years of experience in developing and evaluating instructional curriculum for teaching rifle marksmanship to new junior shooters has led us to a conclusion that the best sequence for teaching the firing positions, for most shooting coaches in most instructional situations, is to start with a supported position where basic shot technique can be most effectively practiced. The second position taught should be prone. Prone should come after standing because it is more complicated and because proper sling use can be best be taught after the new shooter is comfortable in handling and firing the rifle. The fourth position should be kneeling, because it is the most complicated position and because prone position experience makes it easier to learn kneeling.

Continual evaluation of the instructional curriculum we provide to several organizations has also led to some changes in the method that we recommend coaches use to teach prone. Earlier methods used a three-step method: 1) get into position without the rifle, 2) get into with the rifle, but without the sling and 3) assume the position with the rifle and sling. In numerous trials with new shooters, better prone positions were developed when we had new shooters attach the sling to the rifle and put it on before getting into position. The teaching method then goes through a series of key points that must be followed in order.

**Steps in Building the Prone Position**

1. Place the shooting mat at a 25-30 degree angle to the line of fire.
2. Put the SLING on long and loose.
3. Lie down on the mat with the left ELBOW under the left sideline.
4. Position the BUTT UP in the shoulder so the head is up.
5. Adjust the LEFT HAND location on the stock to bring the sights to target level.
6. Tighten the SLING until it supports the rifle.
7. ROTATE the position on the left elbow so the sights point at your target.

Let’s go through the *Steps in Building the Prone Position* to see how they fit together and to understand what each step seeks to establish. Note that all descriptions are for a right-handed shooter—simply reverse left and right for a left-handed shooter.

**Step 1:** Place the shooting mat at a 25-30 degree angle to the line of fire. Prone should be fired on a shooting mat so the initial placement of the mat can help set up the proper body angle when it lies in position. If you place the mat at a 25-30 degree angle, even a first-time shooter will start by laying on the mat with the body at this angle to the line of fire. Most good prone positions will end up with the body lying at about this angle.

**Step 2:** Kneel on the mat with the rifle and put the sling on. Start by making sure the sling swivel is moved forward so that it will not influence the left hand location. Also make sure that the sling length is as long as possible. This will assure that the sling is “long and loose” when the shooter first gets into position. Form the arm loop, turn it one-half turn to the left, place the loop high on the arm and tighten the arm loop, but not the sling. Extend the left arm and rotate it over the sling so that the left hand grasps the fore-end and the sling passes over the back of the hand. Be sure to keep the sling long and loose at this stage—trying to adjust sling length before getting into position is one of the worst mistakes that can be made.

**Step 3:** Lie down on the mat with the left ELBOW under the left sideline. After lying down with the proper body angle, there are three keys to building the position correctly. The first position key is the left elbow. To determine where it should be placed, have the shooter imagine a straight line extending from the left foot to the left hand. The correct location for the left elbow is directly under this line. As a coach you can stand over or behind the shooter and easily see whether the elbow is under this “sideline.” Placing the elbow directly under the left sideline will keep an imaginary plane cutting through the bent arm and sling vertical so that it is best positioned to support the weight of the rifle and upper body.

**Step 4:** Position the BUTT UP in the shoulder so the head is up. The second position key is the location of the butt-plate in the shoulder because the placement of the butt-plate determines the head position. The code phrase to remember here is “butt up—head
An Improved Method for Teaching Prone

**Step 4:** Place the butt-plate high enough in the shoulder to keep the head reasonably erect. If the butt-plate is up in the shoulder, the head will also be up so that the shooter can look comfortably forward through the sights. If the butt-plate is placed too low, the head must be lowered so that the eye must look up instead of forward and aiming is strained. Once the butt-plate—head position relationship is established, the butt should not be shifted up or down in the shoulder to get the sights to point at the target. Do that by going to Step 5. And remember that at this step, the sling swivel must still be forward and the sling must remain loose.

**Step 5:** Adjust the **LEFT HAND location on the stock to bring the sights to the level of the targets.** At this stage in building the position, the shooter must be concerned only with raising or lowering the rifle and rifle sights to bring the sights to the level of the targets. Do not try to force the sights to align on a particular target. This vertical adjustment must be made by shifting the left hand forward to lower the sights or rearward to raise the sights. Here is where a coach on assistant can help. With the left hand located so that the sight point at target level, the coach should move the sling swivel back to the fork of the hand and tighten it to mark the proper hand location.

**Step 6:** Tighten the sling until it supports the rifle. Only after the basic prone body position that is determined by the body angle, left elbow location, butt-plate-head relationship and left hand location on the fore-end is established, should the sling be tightened. After these checkpoints or position keys are established, then tighten the sling until it takes over the work of supporting the rifle.

**Step 7:** Rotate the **position on the left elbow so the sights point at your target.** With the body in position, and with the sling supporting the rifle and upper body, the sights should be pointing at target level, but they most will not be pointing at the correct target. The proper way to move the sights to the correct target is to shift or rotate the entire body-rifle position on the left elbow. The wrong way to do this is to try to muscle or force the sights to point at the target. Learning to shift the entire body-rifle position over the pivot point provided by the left elbow is really the first step in learning how to adjust the natural point of aim (NPA), which will later become a critical success factor in prone. Make this shift by using the feet and legs to lift the body and move it to the right or left (opposite the direction the sights must move on the targets) until the sights point naturally at your target.

This teaching method is distinguished by how few details are taught when initially getting a new shooter into position. Indeed, many coaches must resist the impulse to teach details like foot and leg position or precise elbow placement. Other critical details like getting the shoulders and spine to form an imaginary “T” are automatically achieved if the new shooter simply lies down with the sling long and loose so that the body holds the rifle in its most natural position. The critical thing to remember here is to save the details for later—shoot in this basic position long enough to become comfortable with it—then attend to the details.

Once the basic prone position is established by following these seven steps in building the position, the new shooter must complete many dry fire and live fire repetitions in the position. This is necessary before a new shooter can begin to feel comfortable in it. As this experience base expands, however, the new shooter can start to pay attention to critical success factors like relaxing the left arm as it supports the rifle, relaxing the upper body, sensing and centering the NPA and achieving a near-perfect sight picture for each shot. When this time comes, the new shooters will already have a sound foundation upon which to perfect the prone position.
Recent experiences in training instructors for both the JROTC Marksmanship Instructors Course (JMJC) and the CMP Games Master Club Instructor program have helped us refine and improve the methods of instruction that we recommend coaches and instructors use to teach the standing position to new shooters, whether they be juniors or adults. Indeed, the more we teach coaches, instructors or new shooters, the more we are convinced that what they are taught must not only be stripped down to the raw basics, but that those basics must be taught in a specific order. To teach too much or to teach in the wrong order will slow new shooters’ development and leave them in need of remedial instruction later.

In the standing position, the shooter holds and aims the rifle while standing erect over a small support surface established by the two feet. For a new shooter to have a relatively steady (steady for a while standing erect over a small support surface established by the two feet) position it must exhibit three features: 1) the feet must be positioned to turn the body 90 to 100 degrees away from the target, 2) the body must be configured in such a way that the position it must exhibit. Note that all descriptions are for a right-handed shooter—simply reverse left and right for a left-handed shooter. After reviewing these steps with new shooters in a brief instructional session, the coach or instructor should lead the process of building new standing positions by talking new shooters through these six steps, one step at a time, in order. Go slowly enough with this process that any failure to perform one of these steps correctly can be corrected before going to the next step.

Let’s go through the Steps in Building a New Standing Position to see how these steps fit together and to understand what each step seeks to establish. Note that all descriptions are for a right-handed shooter—simply reverse left and right for a left-handed shooter. After reviewing these steps with new shooters in a brief instructional session, the coach or instructor should lead the process of building new standing positions by talking new shooters through these six steps, one step at a time, in order. Go slowly enough with this process that any failure to perform one of these steps correctly can be corrected before going to the next step.

### STEPS IN BUILDING A NEW STANDING POSITION

1. **Orient the Body**—stand on the firing line and turn the body 90 degrees away from the target.
2. **Shoulder the Rifle**—while keeping the wrist straight, grasp the fore-end just ahead trigger guard—place the butt plate in the shoulder and drop the left arm down onto the side or hip.
3. **Position the Left Elbow**—place the left elbow on the side or hip so that it is directly under the rifle.
4. **Position the Butt and Head**—lower the head to the cheek-piece to look through the sights. Adjust the location of the butt-plate in the shoulder so that the head is reasonably erect while aiming.
5. **Relax and Balance the Position**—after placing the rifle in position, relax the left shoulder and arm down and balance the position so that the weight of the body and rifle is equally distributed over the feet.
6. **Select the Correct Left Hand-Wrist Position**—with the rifle in position, look through the sights to see if they point at the target or above or below the target. Select a left hand position that raises the sights to the level of the target while completing the column of support between the hip and rifle.

**Step 1: Orient the Body.**
Step to the firing line with the rifle and orient the body by turning it 90 degrees away from the target. Do this by turning both feet so that the body faces 90 degrees away from the target and the left side points towards the target. If done correctly, imaginary lines drawn through the hips and feet will point directly at the target. At this point, how far apart the feet are placed is not important. Within reason, how close or far apart the feet are spread does not affect stability, but turning the body so that the left hip and left foot end up directly under the rifle does affect stability.

**Step 2: Shoulder the rifle.**
To start to build the position, the rifle must be placed in position on the shoulder. Do this by grasping the rifle with the left hand just ahead of the trigger guard. Keep the left wrist straight while doing this. Seat the butt-plate in the right shoulder and drop the left arm down on the side or hip.

**Step 3: Position the Left Elbow.** With the rifle at the shoulder, shift the left elbow position so that it is directly under the rifle. In most cases, that will require moving the elbow forward. Be sure to also keep the left hip over the feet and directly under the rifle while doing this.

**Step 3.** Position the left elbow by resting it on the side or hip directly under the rifle.
Teaching the Standing Position

Step 4: Position the Butt and Head. The correct position for the butt-plate is determined by the correct position for the head, not vice versa. In the correct position, the head remains nearly erect so that aiming is easy and comfortable. Determine where to locate the butt-plate in the shoulder by slightly lowering the head down to the cheek-piece to look through the sights. If this movement is small and the head remains reasonably erect while looking through the sights, the butt location is good. If the head must drop a lot to look through the sights, correct this by raising the butt-plate in the shoulder.

Step 5: Relax and Balance the Position. Before going to the final step of selecting the correct hand-wrist position to support the rifle, it is necessary to relax the left shoulder and arm down onto the side or hip. It is also necessary to stand so that the weight of the body-rifle system is balanced over both feet. This may require leaning or bending the body slightly to the right and rear to counterbalance the weight of the rifle, but most new shooters do this automatically.

Step 6: Select a Left Hand-Wrist Position. With the rifle in position on the shoulder, the left shoulder and arm relaxed onto the side or hip and the weight of the body-rifle system balanced over the feet, look through the sights. Do they point at the target or do they point above or below the target? At this point, it is critical not to force the rifle up or down to get the sights pointing at the target. The correct way to do this is to select a left hand-wrist position that fills the support gap between the left hip and the rifle fore-end. A good mid-range starting position is to keep the wrist straight and either set the rifle on top of a closed fist or support the rifle between the thumb and the first knuckle. Either of these options will work well for most shooters. However, shooters with proportionately longer arms and shorter torsos will have rifle sights pointing high with either of these hand positions. By breaking the wrist and resting the rifle in the flat of the hand or by keeping the wrist straight and dropping the rifle down into the fork of the hand they should be able to comfortably bring the sights down to the target. Conversely, shooters with proportionately shorter arms and longer torsos need a wrist-hand position that adds more length to the support column. They can achieve this by resting the rifle between the spit fingers and thumb, up on the second knuckles or, highest of all, on the thumb and fingertips. The chart illustrates all of these left hand-wrist options in order of height.

Adjusting the position by shifting the rifle up or down to place the sights at the level of the target while the position is relaxed and balanced is as much of the concept of natural point of aim as a coach or instructor should introduce to new shooters. Simply have them select a hand position that raises the sights to the level of the target, keep their feet turned 90 to 100 degrees away from the target and shoot by bringing the sights onto the target. Later, after many hundreds of dry and live fire repetitions, fine adjustments in rifle height and slight horizontal shifts that remain within the 90-100 degree turn standard can be introduced, but not now!

As soon as a new standing position is developed that applies these steps correctly, it is important to teach new shooters to check their positions before each shot. Once their feet are in place, they must learn not to move their feet until they finish a firing exercise. When placing the rifle in position for each shot, every shooter should make these checks before starting to fire the shot:

1. That the butt-plate location in the shoulder is the same for every shot.
2. That the left elbow is under the rifle.
3. That the left shoulder and arm are relaxed down onto the side or hip.
4. That the body-rifle weight is balanced over the feet.

Hand-Wrist Positions for the Left Support Arm, from lowest (on left) to highest (on right)
Once the basic standing position is established, the shooter must complete many dry fire and live fire repetitions in the position to become comfortable with it. As this experience base expands, the stability of the position will become better and better and the scores higher and higher, that is, as long as the position adequately incorporates the features that best ensure standing position stability: 1) the feet are turned so that the body faces 90 to 100 degrees away from the target, 2) the body is configured so that there is a straight column of support from the feet straight up through the left hip and elbow to the rifle and 3) the rifle-body weight supported by that column is relaxed and balanced over the feet.

## Common New Shooter Mistakes in Standing

Coaches of new shooters must be especially alert to detect and correct these common mistakes:

1. **Incorrect body turn**—too little or too much body turn makes it impossible to have a straight column of support under the rifle and upper body and difficult to balance the position.

2. **Left elbow not under rifle**—incorrect elbow positioning misaligns the column of support.

3. **Left hip not under rifle**—incorrect hip position misaligns the support column and makes attaining good balance more difficult.

4. **Butt too low in shoulder**—when the head is tipped down too far to see through the sights comfortably, the butt must be raised in the shoulder and a higher left hand-wrist position must be selected.

5. **Left arm not relaxed down onto side or hip**—this means the rifle is being supported with muscles instead of bones—relax the arm down onto the side or hip and, if necessary, select a higher hand position.
The kneeling position is the most complicated of the three shooting positions that are typically taught to juniors. Kneeling usually follows prone since prone offers a better setting for mastering the use of the rifle. Nevertheless, the proper method of initially adjusting a sling is the same in kneeling as in prone. Kneeling also requires the effective use of a second position support, the kneeling roll.

The prerequisites for developing a stable kneeling position capable of steady improvement are 1) Sit with as much body weight as possible relaxed and balanced over the heel and kneeling roll, 2) align and balance the shoulders and hips over the heel so that tension in the torso is minimized and 3) configure and balance the left leg, left arm and sling above the left foot to provide stability in supporting the rifle while not compromising prerequisites 1) and 2). All this sounds complicated and it is, but if new shooters follow the “Steps in Building a New Kneeling Position” they will start with a kneeling position that conforms to these requirements.

Step 1--Build The Position Foundation. Just as we did for prone and standing, let’s go through the Steps in Building a New Kneeling Position to see how these steps fit together and what each step seeks to establish. All descriptions are for right-handed shooters—simply reverse left and right for left-handed shooters. First, review these steps with new shooters in a brief instructional session, then build their new kneeling positions by talking them through these steps, one at a time, in order. Go slowly so that any difficulty in performing a step properly can be corrected before going to the next step.

In building any position, the first step is to establish the foundation. In standing, that was done by locating the feet so that the body is turned 90 degrees from the target. The position is then built upon this foundation by placing the left elbow and butt-plate in position. In prone, the foundation is the floor or shooting mat and the position is built by locating the left elbow and butt-plate. In kneeling, the position’s foundation starts with a kneeling roll, but there are several additional steps to building the complete kneeling position foundation.

Step 1a--Position the Kneeling Roll. The kneeling roll is the base point for the kneeling position. Start with a roll that is three-fourths filled so that a shallow “V” can be formed in the center. Turn the roll 40 to 60 degrees away from the line of fire. It is also recommended that a shooting mat not be used in kneeling; there is no real need for padding under the knee or feet; a mat only makes the support surface a little less solid.

**Step 1a.** Place the kneeling roll on the firing point and turn it 40 to 60 degrees away from the line of fire.

Step 1b. Kneel over the roll—place the ankle on the roll—keep the toe extended and the foot vertical (heel up).

Step 1c. Sit on the right heel. Let the weight of the body relax down onto the heel. Keep the foot vertical.

Step 1d. Locate the left lower leg so that it is vertical. This photo shows the kneeling position foundation in place—the kneeling roll and vertical left foot supports the body weight and the left leg is ready to support the weight of the rifle.

**Step 1d.** Locate the left lower leg so that it is vertical.
Teaching the Kneeling Position

**Step 1a—Kneel over the Roll.** Start with the right toe behind the kneeling roll. Kneel with the right ankle resting on the V in the kneeling roll. Extend the toe to the rear and keep the heel vertical. The key to this step is keeping the foot vertical. If the foot is turned even slightly to the side, it will gradually turn further while shooting due to the weight of the body pressing down on it.

**Step 1c—Sit on Heel.** Try to sit with the heel placed in the center of the buttocks. Rest as much body weight as possible on the heel. Indeed, the key to this step is to sit with the weight back on the heel.

**Step 1d—Locate the Left Leg.** The left leg provides the support base for the weight of the rifle and left arm. The correct location for the leg is to place the foot so that the lower leg is vertical. It is OK to shift the left foot and lower leg slightly forward, especially for a shooter with longer legs and a short torso. It is not OK to shift the left foot back so that the lower leg is angled to the rear.

**Step 2—Add the Sling and Rifle.** With the position foundation established, you are ready to put the sling on and attach it to the rifle. Place the sling high on the arm, just as in prone. Likewise, leave the sling long and loose, with the sling swivel moved forward. With the sling on the arm and attached to the rifle, you are ready to build the upper part of the position.

**Step 3—Shoulder the Rifle and Locate the Left Elbow.** To build the upper part of the kneeling position, the rifle must be placed in the shoulder and the left arm dropped to its natural location on the left leg or knee. The key to this step is placing the left elbow in the correct location on the left knee or leg. To do that, place the butt-plate in the shoulder, continue to sit with your weight back on your heel and drop the left elbow onto the left leg. Do not reach forward with the left elbow; let it drop naturally to the leg or knee. For some shooters, the elbow will fall on the knee; for other shooters, the elbow will fall somewhere behind the knee. For only a rare few, will the elbow fall ahead of the knee. Be sure the sling remains loose when locating the left elbow position.

**Step 4—Position the Butt and Head.** Just as in standing and prone, the correct position for the butt-plate in the shoulder is determined by the correct position for the head. The head must be reasonably erect in all positions. Locate the butt-plate high enough in the shoulder that the head and eyes can look forward comfortably and without straining while aiming. Try to keep the butt-plate close to the neck while aiming in kneeling.

**Step 5—Adjust the Rifle Height.** After the butt plate is fixed in the shoulder so that aiming is comfortable, the height of the rifle must be adjusted so that the sights are aligned at the level of the targets. Do this the same way it was done in prone, by shifting the left hand forward or rearward to raise or lower the rifle until the sights point at target level. Do not worry about where your target is, only that the sights are at target level.

**Step 6—Adjust Sling Swivel and Tighten Sling.** With the sights at target level, the sling swivel should be moved back to the hand and tightened in place. Then the sling must be tightened so that it fully supports the weight of the rifle.
Teaching the Kneeling Position

**Step 7. Rotate the Position to the Target.** The final step in building the kneeling position is to rotate the position over the right heel and kneeling roll until the sights point at your target. The pivot point for rotating the kneeling position is the right heel and kneeling roll. Rotate by shifting the left foot and right knee right or left as necessary to bring the sights onto the correct target.

After the new position is built, it is important to have new shooters do both dry and live firing in the position to become comfortable with the new position. Teach them to prepare to fire shots in kneeling by checking:

1. That the butt-plate location in the shoulder is the same for every shot.
2. That weight of the body is relaxed down onto the right heel and kneeling roll.
3. That the left arm and shoulder are totally relaxed with the sling supporting all of the rifle weight.
4. That the weight of the body-rifle system is balanced over the right heel and left heel; there should be little or no weight on the right knee.

Consistency, relaxation and balance are the keys to getting good kneeling scores after a sound position structure is established. Consistency means placing the butt-plate and elbow in the same location for each shot. Relaxation means relaxing the body weight down onto the heel and kneeling roll and letting the sling totally support the weight of the rifle. Balance means balancing the weight of the relaxed body-rifle system over the two heels. After many practice sessions where good position structure and sound technique are maintained, most shooters will reach a point where they need to fine-tune their position because kneeling is, after all, a position where the complex interrelationship of several parts of the body, rifle, sling and kneeling roll must be worked out. That cannot begin without a good foundation, however.

**Common New Shooter Mistakes in Kneeling**

Coaches should be alert to detect and correct these common mistakes:

1. **Kneeling roll too big** (or too small)—If the kneeling roll is too big or too full, the body will be too high.
2. **Right foot turned**—if the foot is not vertical, it will gradually turn further under the weight of the body; a vertical foot is stable and cannot turn further.
3. **Pulling lower left leg back**—this shifts weight forward off of the heel and reduces stability.
4. **Sitting up straight**—sitting up straight increases tension in the body; instead, let the shoulders and upper body relax down.
5. **Unbalanced position**—leaning to the right usually by placing weight on the right knee requires lots of muscle tension to keep the body in position; instead, balance the entire weight of the body-rifle system over the right and left heels.

Consistency, relaxation and balance are the keys to getting good kneeling scores after a sound position structure is established.
PRONE, STANDING AND KNEELING POSITIONS
USED BY OLYMPIC AND WORLD CHAMPIONS

On left:
Henri Junghaenel
Germany
Olympic gold medal
50m Rifle Prone Men

On left:
Virginia THRASHER
USA
Olympic gold medal
10m Air Rifle Women

On right:
Sergei KAMENSKIY
RUSSIA
Olympic silver medal
50m Rifle 3x40
World Champion
10m Air Rifle Men

Below Left:
Nicco CAMPRIANI
ITALY
3 Olympic gold medals
50m Rifle 3x40 Men (2X)
10m Air Rifle Men

On right:
Barbara ENGLEDER
GERMANY
Olympic gold medal
50m Rifle 3x40
10m Air Rifle Women